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ABSTRACT

Sixty children, 20 from each of grades 1, 3, and 5 served as subjects in a study that examined how elementary school age children realize the intent of directives embedded within written and picture book narratives. Directives were defined as the range of language forms used to direct actions (imperative statement, need/want statement, permission request, explicit question, nonexplicit question, and hint). The children read the written stories and listened to the picture book stories prior to answering questions concerning pragmatic relations expressed in the texts. The findings indicated that alternative directive processing strategies evolved as the children gained experience in varying language choice in different social settings. These strategies--reciprocity, reflexivity, and reasoning--reflected a gradual shift in the children's thinking from reliance on situational context to consideration of the relationship of form, function, and context in comprehension. A reasoning processing strategy emerged as the children developed a cognitive model of pragmatic relations in conversation. (Author/HOD)

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Technical Report No. 341

MEANS TO AN END: STRATEGIES IN CHILDHOOD DIRECTIVE COMPREHENSION

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September 1985

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Abstract

This report examines the development of pragmatic competence during the elementary school years. It presents findings of an quasi-experimental study that contrasted first-, third-, and fifth-grade students' comprehension of directives varying in degree of explicitness. The directives were embedded within written and picture book narratives. The children read the written stories and listened to the picture book stories prior to answering questions related to pragmatic relations expressed in the texts.

Significant findings indicate that alternative directive processing strategies evolve as children gain experience in varying language choice in different social settings. These strategies, reciprocity, reflexivity, and reasoning, reflect a gradual shift in children's thinking from reliance on situational context to consideration of the relationship of form, function, and context in comprehension. A reasoning processing strategy emerges as children develop a cognitive model of pragmatic relations in conversation. Utilization of such a model appears to be important especially in comprehending inexplicit directives embedded within written narratives.

Means to an End:
Strategies in Childhood Directive Comprehension

Recent psycholinguistic research on the development of pragmatic competence has concerned young children's comprehension and production of directives, the range of language forms used to direct the actions of others. Directives can serve as a useful means to study the development of pragmatic competence for two reasons. First, they embody the pragmatic relationship of form, function, and context in communication; and second, they vary in explicitness and politeness from imperatives and requests to hints which may require inference for successful comprehension.

Past research on production and comprehension of directives has shown that all but the most inexplicit are produced and comprehended easily by preschoolers in active participatory situations (Bates, 1976; Dore, 1976; Ervin-Tripp, 1976, 1977; Garvey, 1976; Hollos & Beeman, 1978; James, 1978; Reeder,1980). There is even some evidence that the speech of 2 1/2-year-olds to adults contains hints and question directives (Newcombe & Zaslow, 1981) and that preschoolers do comprehend some indirect requests (Carrell, 1981). Yet, young children appear to process directives in a manner unlike older children or adults (Schaffer,Hepburn & Collis, 1983; Schneiderman, 1983). For example, Shatz (1975, 1978) discovered that children ages 1;7-2;10 respond appropriately to polite requests spoken to them during conversation with their mothers, but do so initially by attending to situational cues rather than key vocabulary or

associated prosodic devices. She postulated an "action" processing strategy to explain the means by which early directive comprehension takes place: the child identifies an action or object in the mother's speech which can be acted upon in the interest of maintaining interaction. In follow-up experiments, Shatz discovered that young children tend to respond not only to explicit directives but requests, information questions, declaratives, and even ill-formed directives with action. A gradual shift to a "stop-action" strategy in response to information questions was observed in an older group (M age = 2;7), but even in this group 42% of all responses to information questions were of an action type.

Shatz' research raises several important questions concerning the relative importance of text and context in the directive comprehension of children having varying social, cognitive, and language competence. The current research addressed the following questions:

- Beyond the young child's action or stop-action strategies as identified by Shatz, what evidence is there that alternative directive processing approaches evolve as children gain experience in varying language choice in different social settings?
- Do children who construct form, function, and context relations accurately interpret directive meaning differently from those who do not?
- Does the degree to which contextual meaning cues support a text's message affect either the comprehensibility of the directive and/or the processing strategy used?

One important assumption underlying this research is that an

understanding of the text and context relationship gradually develops in the natural course of learning to share meaning with other people in everyday social settings. Frequent participation in high-quality social encounters provides children with the experience needed to broaden knowledge of pragmatic language use. This gradual elaboration of language use knowledge may well alter the process of directive comprehension, encouraging the development of alternative approaches to the construction of directive meaning. Thus, the strategy chosen may depend upon the nature of the language user's background knowledge of form, function, and context relations.

Directives

Directives are one of five speech act categories described in detail by Searle (1969, 1975). Ervin-Tripp (1976, 1977) has identified three categories of directives, each with two sub-categories. Examples of directives are presented in Table 1.

Insert Table 1 about here.

Explicit directives. Explicit directives are those in which the speaker's intention is encoded explicitly in the language form. They are used generally when a speaker expects compliance without question because the speaker may be in a position of authority with reference to the addressee or is addressing a peer or close associate. Comprehension of explicit directives requires that an addressee attend to the linguistic form and associated prosodic cues within the situational context to

recognize that directive intent is being communicated. Imperatives and need/want statements are examples of explicit directives.

Embedded directives. Embedded directives are those in which the speaker's intention is encoded explicitly in an imperative language form embedded within an interrogative frame for reasons of politeness. Polite forms are often used when an addressee is not personally known by the speaker; is in the more powerful position with respect to the likelihood that the intent will be achieved; is in the authority position due to age, rank, or status; or would not otherwise do what the speaker wants. Polite forms can be used to soften intent when explicit forms fail, just as explicit forms are often used to reiterate the intent of intent of requests. In conversational usage, these forms are interpreted immediately as directives in context. No inference is required despite the apparent mix of interrogative linguistic form and imperative intent and content. Explicit questions and permission requests are examples of embedded directives.

Inexplicit directives. Comprehension of inexplicit directives in which intent is not obvious either in the form or content of the utterance requires inference. The ability to infer directive intent or produce inexplicit directives appears to develop as children gain experience in communicating to a wider range of audiences and for a variety of purposes. With experience in communication, children begin to tailor speech to

social situations as theoretical principles and rules of speech act theory, conversational implicature (Grice, 1975), and politeness in communication (Lakoff, 1973) are reflected in everyday language behavior. Examples of inexplicit directives are hints and inexplicit questions.

Central to successful inference of directive intent from inexplicit directive utterances is the addressee's sensitivity to politeness in social interaction. For example, when the speaker barely knows the addressee, it may be unwise to demand compliance. Being polite might mean casting the directive in non-imperative form and content to allow the widest range of response options. Lakoff (1973) writes that such violations of efficiency in speech are related to the pragmatic rule "be polite" or "don't impose, give options." Speakers choosing an inexplicit form violate principles of clarity, economy, informativeness, and truthfulness in cooperative conversation. They are justified in doing so because they assume the addressee shares the knowledge of occasions when discreteness takes precedence over clarity in conversation.

Inexplicit directives occur when the chosen form and content do not represent a conventional means to express directive intent: the intended illocutionary effect, by which a speaker conveys the directive's intent, and the intended perlocutionary effect, by which the speaker conveys what the addressee must do to show compliance with the intent, are not explicit. A speaker

choosing an inexplicit form performs a second illocutionary act indirectly by literally producing the apparent illocutionary act. The speaker communicates more than is superficially apparent with respect to language form and content. The addressee must recognize the deliberate violation of conversational principles, understanding that despite these violations the speaker is sincere in intending to communicate the second illocutionary act. The addressee is given the greater number of compliance options as a result of the speaker's choice of directive type.

Examples of inexplicit directives are hints and inexplicit questions. Using Searle's model as a prototype (1975, p. 75), a plausible sequence of steps in comprehension of the inexplicit directive, "The baby's crying" issued in an otherwise quiet house by the baby's mother to the baby's father might be the following:

- The speaker addresses the listener's awareness that the baby is crying. (A conversational fact is stated and propositional content is identified.)
- The listener assumes the speaker is cooperative in conversation and, therefore, the speaker's statement has a point. (The principle of cooperation in conversation is utilized; the speaker's sincerity in wanting the act accomplished is acknowledged.)
- The conversational context is such that the speaker isn't interested in whether the listener knows that the baby is crying. (refers to background knowledge)
- The speaker probably knows that the listener knows that the baby is crying, and therefore, the speaker's statement is more than a conversational fact; it has a second illocutionary intent. (refers to background knowledge inferred in steps 1-4; the intended illocutionary effect is determined.)

The preparatory condition is that the listener's ability to do the act is predicated in the propositional content. Therefore, the speaker does not expect the listener merely to acknowledge that the baby is crying. (The preparatory conditions for directives exist; the intended perlocutionary effect is inferred in steps 1-5.)

- Extralinguistic and paralinguistic context cues are considered with respect to the linguistic message. (refers to background knowledge)

- The speaker expects the listener to carry out the intention of the act; that is, the listener will do something to stop the crying. (The intended perlocutionary effect inferred in steps 1-5 is confirmed in steps 6-7.)

- Therefore, in the absence of any other plausible illocutionary intent, the speaker is waiting for the listener to carry out the intention of the act. The listener picks up the baby and attempts to stop the crying. (An appropriate compliant response results from the sequential steps in comprehension.)

It is, of course, entirely possible to comprehend the intent of even inexplicit directives without being able to verbally identify form, function, and context relations. Yet, there is some evidence that as children become more aware of the text and context relationship, the process of directive comprehension changes to make use of more sophisticated knowledge when needed.

When children begin to pay more attention to the choice of language form within particular social contexts, they are demonstrating a growing awareness of pragmatic relations. There is evidence that school-age children vary their directive choice with respect to politeness requirements (Grimm, 1975), participant characteristics, and setting (Hollos & Beeman, 1978; Mitchell-Kernan & Kernan, 1977) or the extent to which a form's

language context requires a literal interpretation (Ackerman, 1978).

Children, ages 2;10-6;2, also have been shown to become increasingly able to judge the politeness features of discourse, deciding which of two choices is more polite and identifying the pragmatic element marking the feature (Bates, 1976). Unfortunately, Bates did not include older children in her study and was, thus, unable to observe the development of pragmatic competence during the elementary school years. As it stands, the oldest children in Bates' study were too young to test her belief that comprehension of the most inexplicit directives is possible only "when concrete operations are established and the child is confident and versatile in role-taking skills" (p. 293). In addition, the oldest subjects were only able to offer correct judgments of politeness 58% of the time, leading Bates to add that "the ability to reason actively about pragmatic choices is a separate and later development, distinct from passive competence." Another problem with Bates' study was that the categories used to judge the children's understanding of the pragmatic element went only so far as to identify responses which were sensitive to the the pragmatic device rather than to responses which may indicate an accurate understanding of the form, function, and context relationship. Indeed, Bates acknowledges that the oldest subjects in her study could not "construct indirect speech acts from abstract principles concerning conversational postulates, listener options, etc."(p.

325). Her comments suggest that her subjects had not yet developed the social, cognitive or linguistic competence to effectively understand pragmatic relations. It is possible, however, that elementary school-age who have had more experience using language in social contexts than did Bates' original subjects would show evidence of using the active reasoning processing strategy to which Bates refers.

The current research was conducted to gain insight into both the actual interpretations and the means by which elementary school-age children realize the intent of directives embedded within narratives.

Method

Subjects

Sixty children, 30 boys and 30 girls, served as subjects. Twenty children from each of Grades 1, 3, and 5 were selected randomly from a largely white, middle class, and English-speaking population of students attending an urban school. Homogeneity of population was considered important to minimize potential effects of socioeconomic status or ethnicity on discourse comprehension.

Materials

Stories. Twelve stories served as the test materials, 6 assigned to Set A and 6 to Set B. Each set contained 1 example of each of the 6 directive types previously identified. Each story within a set was constructed in two formats: picture book without

accompanying written text and written text without accompanying pictures. The contrast between picture book stories enriched by oral storytelling and written stories without accompanying pictures read silently was intentionally dramatic to study the relationship of text and context in directive comprehension. Each narrative highlighted a familiar conversational situation which climaxed with a character uttering a directive appropriate in form and content within the story's context. Part of the child's task was to role-play a response to the directive which could serve as a conclusion to the conversational sequence. The directives used in this study are presented in Table 1.

The texts were written at a beginning reader level so that students completing Grade 1 could decode them without difficulty. This was verified in an earlier pilot study. In writing the texts, the following readability criteria were taken into consideration: First, whenever possible, language forms were chosen which promote text cohesion, averaging 2-3 lexical or grammatical "ties" per sentence to link semantic relations between phrases and sentences. Second, whenever possible, language structures and vocabulary were chosen which reflect natural conversational usage while maintaining standardization. Third, prosodic and situational meaning cues associated with spoken language were incorporated into the written text linguistically, whenever possible. Cues included space and time adverbs, anaphoric pronouns and demonstrative adjectives, punctuation devices, and explicit lexical references to such

context characteristics as participant relationships and setting. A sample story is included in Appendix A.

Questions. Following the presentation of a narrative, questions were posed to examine the child's interpretation of the directive in context and to identify aspects of underlying knowledge which the child may have utilized in interpreting the directive (see Appendix B). There were three sets of questions.

Set 1. The first set involved interpretation of directive intent and response in context. The items were developed to address the research questions identified earlier, particularly questions 1 and 3. They sought, first, to determine whether the child had comprehended the utterance as a directive, in which case the directive's intended illocutionary *effect* was achieved; and, second, to determine whether the child understood the type of action or verbal response required to show a willingness to comply, indicating the directive's perlocutionary *effect* had been achieved.

To elicit language similar to that which might occur in everyday situations, the child was asked to role-play the character in the narrative to whom the directive was addressed and respond to the directive intent. An appropriate compliant response to question 1 indicated that the directive's intended perlocutionary *effect* had been achieved. An appropriate noncompliant response to question 2 indicated that the directive's illocutionary *effect* had been understood. An

acceptable response to question 3 indicated that the child could generate a response to directive intent which conveyed misunderstanding. A fourth question asked the child to shift to the speaker's role by identifying the speaker's intent in uttering the directive. Responses were evaluated as acceptable, earning 1 point, if they achieved their communicative goal, or unacceptable, earning no points, if they did not. A fifth point was added to the total score for each directive if the child adequately responded to question 1. The additional credit acknowledged that an appropriate compliant response means not only that the intended perlocutionary effect is achieved, but also that the intended illocutionary effect is achieved. A total of 60 points was possible on this related to reading comprehension.

Set 2. The second set of questions examined the children's awareness of the range of language forms available to speakers expressing their point of view through language choice. These items were developed to address the 3 research questions indicated earlier, particularly questions 2 and 3. To elaborate on politeness features studied by Bates (1976) and Ervin-Tripp (1976; 1977), an extended range of directives and politeness features was included here: explicit directives and harsh intonation; explicit directives and soft intonation +/- please or vocative; embedded directives headed by will, can, may +/- please or vocative; embedded directives headed by would, could +/- please or vocative; and inexplicit directives such as hints

or non-explicit questions. Responses were coded with respect to politeness gradations from direct expressions to "even nicer" paraphrases of intent. A score of 5 politeness gradations was possible for each story. Sixty points was possible on this task, 30 on questions related to listening comprehension and 30 related to reading comprehension.

Set 3. The final questions concerned the children's ability to reason the relationship of language choice to social context. The reasoning items were developed to address the research questions noted earlier, particularly question 2. They asked the children to consider the directive's linguistic form in its larger situational context. A Pragmatic Sensitivity Scale was developed as an elaboration of Bates's (1976) reasoning scale to measure the extent to which children consider form, function, and context relations in processing directives within conversational narrative. This scale attempted to account for the developing reasoning abilities of elementary school-age children. Responses were scaled 0-5, yielding a possible score of 5 per story. A total of 60 points was possible on the reasoning questions, 30 related to listening comprehension and 30 related to reading comprehension. The Pragmatic Sensitivity Scale is included as Appendix C.

Procedure

The children were assigned randomly to the experimental conditions. Half the children listened to an oral telling of Set

A stories presented in picture book format and read Set B stories presented in written format while the other half listened to Set B stories and read Set A stories. A comparison of listening and reading comprehension scores revealed no significant differences in performance attributable to differences in the content of the task materials. Students were also assigned randomly to mode presentation conditions, half listening to stories before reading the second set and the other half reading one set before listening to the second set. No significant differences in performance attributable to order of presentation were detected.

The listening and reading comprehension interviews were presented separately by two researchers employing a standardized format in introducing the tasks and conducting the interviews. Each child participated in the listening and reading comprehension tasks on separate days to lessen potential fatigue effects. A typical sequence for the listening comprehension presentation was as follows: The child was asked to listen to a story while looking at accompanying pictures and, after listening, answer several questions. The child was asked to try to remember the characters, setting, and main ideas, but was encouraged to request a review of the storyline if any part was forgotten.

Using the text which children assigned to the alternative condition would be reading, the researcher told the story in a natural tone using the written form as a guide. The telling of

the tale climaxed by uttering the directive using intonation deemed appropriate in the story's context. At this point, the child was asked to retell the story to verify that the plot had been understood. Once verified, the questions comprising the interview were asked.

The reading comprehension presentation paralleled the listening comprehension presentation except that the child read the text without accompanying pictures. Help in decoding was given whenever requested. No time limits were placed on the child's reading.

Results

Responses to the interview questions were scored independently by two raters with correlations between raters generally exceeding .80. In cases of disagreement, a compromise score was agreed upon by the raters.

Because all aspects of the analysis were planned prior to data collection, the Dunn-Bonferroni Planned Analysis statistical model was chosen. Two-tailed hypotheses were tested with 1,57 *df* at $p < .05$. The Dunn table was entered with the number of contrasts for each hypothesis, $C = 3$. For $C = 3$, $df = 57$, $p < .05$, $t_{Dunn} > 2.48$. Confidence intervals are reported for significant findings. In addition to the statistical tests, qualitative analyses examined specific responses in detail.

Analysis 1

The first set of questions was designed to determine whether elementary school-age children could respond to and identify the intent of directives embedded within spoken and written conversational narratives. The questions sought to elicit responses which would be indicative of language competence in active, participatory situations. It was of particular interest to compare directive comprehension across presentation modes.

Insert Table 2 about here.

Several pertinent findings resulted from the analysis of responses to Set 1 questions. First, as the mean scores in Table 2 reveal, when responding to picture book storylines presented orally, children in Grades 1, 3, and 5 performed equally well on all questions across directive types. Given a picture book format enriched by oral storytelling, even Grade 1 students were able to identify directive intent and respond to that intent in a variety of ways. For the younger children in particular, the availability of situational cues in the form of pictures and prosodic cues as indicated by intonation may have played an important role in successful comprehension of even the inexplicit directives.

Second, when asked to read narratives, fifth-grade students proved significantly more able (M = 27.8) than first-(M = 22.9), t_{Dunn} = 4.81, $p < .05$ or third-grade students (M = [illegible].8), t_{Dunn} = 2.91, $p < .05$ to identify and respond to the intent of directives embedded within these texts. Confidence intervals indicate that

fifth-grade students scored between 2 and 8 points higher on these questions than did first-grade students and between 1 and 6 points higher than third-grade students. These findings suggest that the context in which the stories were presented influenced the younger children's comprehension of the narratives. Given written texts, first- and third-grade students were not as proficient as fifth-grade students in constructing the author's message although they had little difficulty when narratives were presented orally.

A more detailed examination of responses to the interview questions following the reading of the written narratives yielded several interesting performance similarities and differences across grade. First, students in Grades 1 and 3 performed equally well on the five questions comprising Set 1. Second, Grade 5 students produced more pragmatically appropriate responses to all the questions than did Grade 1 students. However, when compared with the responses of third-grade students, those of fifth-grade students were superior only on Question 4, the directive intent, and Question 3, contextual inappropriateness. This trend suggests that third-grade students have made progress in responding to the intended illocutionary and perlocutionary effects of directives embedded within written texts, but lag behind the fifth-grade students on the remaining items. It appears that the latter items may have been more difficult than the intended illocutionary effect and intended perlocutionary effect items. The directive intent question

required reflection on speaker meaning beyond a contextually sensitive addressee response. The contextually inappropriate item required that the child go beyond a contextually sensitive response by offering one that might be contextually sensitive but pragmatically inappropriate. Garvey (1977) suggests that producing contextually inappropriate responses may be an indication of metalinguistic awareness because this type of response implies child knows what is correct but can choose an inappropriate response purposefully when playing with a pragmatic aspect of language.

Qualitative differences in responses to Set I questions were also observed on the listening and reading comprehension tasks. Some children were clearly more clever in representing point of view through language choice. Older children tended to produce elaborate verbal responses while the younger ones offered simple, sometimes elliptical, responses which often required reference to story context for interpretation. For example, when asked to provide an appropriate compliant response to the directive "Miss Crane, would you please help us get the ball?" spoken by a second- grade student to her teacher, a first-grade student said, "Yes, Sue." However, a fifth-grade student said, "Ok. I'll help you. Go into the classroom and get a stick." When asked to provide an appropriate noncompliant response to the directive "Mommy, Mommy, I need the hammer!" spoken by a three-year-old to her mother, a first-grade student said, "Jenna, you can't have the hammer." In contrast, a fifth-grade student said, "No. Name

the (xylophone) key. First you have to name 16 colors. You'll get the hammer after you name all of them."

The contextually inappropriate and directive intent items produced the most apparent grade level differences. To the contextually sensitive but pragmatically inappropriate response question, first-grade students were largely unable to offer acceptable responses. Third- grade students offered acceptable action responses, but only fifth-grade students provided both verbal and action responses which were sensitive to the story's context. For example, to the directive, "Why are you playing in the mud?" spoken by an annoyed mother to her children dressed in party clothes, a first-grade student gave an appropriate noncompliant response rather than an inappropriate response: "I don't wanna get out of the mud." A third-grade student provided the contextually sensitive, but inappropriate action, "keep on making mud pies." This action, in effect, tells the speaker that her children are ignoring her, forcing the mother to reiterate the intent of her directive. A fifth-grade student, however, went beyond the acceptable action response noted above by adding the following verbal response: (to Sue) "Let's jump in that mud puddle again."

The directive intent item tapped the ability to synthesize the main idea of the speaker's directive and state the intent. First- and third-grade students who provided acceptable statements tended toward simple responses while those unable to

state intent tended to reiterate the story line. Fifth-grade students identified easily the intent and often went on to provide elaborate reasons as explanations for the directive's use. As an example, in stating the intent of the directive "Hey, Steve, the door's closed" spoken by a character who would like her friend to open the door, one first-grade student missed the point. She said that the speaker was announcing that "the door is closed." A third-grade student provided a simple, but acceptable statement of intent: "She wants the door open." A fifth-grade student elaborated on the intent when he said, "She wants the door open so she can go inside and put the bag down." It should be noted, however, that creative elaboration did not have an effect on the acceptability of responses. Regardless of elaboration, children who gave acceptable listener responses were more likely to offer acceptable statements of intent.

The pattern of reading comprehension responses to Set 1 questions suggests that certain characteristics of the written mode may have made it more difficult for the younger children to comprehend accurately the pragmatic features of the narratives. Although the first-grade students were able to decode the written stories, their responses to the Set 1 questions were consistently inferior to those of the fifth-grade students. The first-grade students appear to have concentrated on deciphering the written code, placing relatively less attention on the pragmatic relations exposed linguistically in the texts. The third-grade students' improved performance on the intended illocutionary

effect and intended perlocutionary effect items indicates greater sensitivity to the ways by which an author can convey pragmatic relations linguistically; even the third grade students, however, did not comprehend pragmatic information embedded within written discourse as well as they comprehended similar information embedded within spoken language.

The fourth finding with respect to Set 1 questions was that the degree of explicitness inherent in different directive categories did not have an overall effect on comprehension, regardless of presentation mode. When contrasting the comprehension of first- and third-grade students with that of fifth-grade students on Set 1 questions, all directive categories proved more difficult for the younger children.

When contrasting comprehension of different directives within grade rather than across grade, however, there was some indication that first- and third-grade students did, indeed, have more difficulty comprehending the pragmatic characteristics of inexplicit rather than explicit or embedded directives. First-grade students, in particular, had the most difficulty comprehending inexplicit directives embedded within the written texts. This became apparent by computing a difference in means score for each directive category presented in the individual listening and reading comprehension tasks. As indicated in Table 3, first-grade students scored similarly on explicit and embedded directives across discourse modes, but there was a disparity

between their scores on inexplicit directives presented orally versus those presented in writing. This gap was sufficiently large to create an overall significant effect in these comparisons. Confidence intervals indicate that for first-grade students, the gap between listening and reading comprehension of directives as measured by the Set 1 questions was likely to be between 1 and 4 points greater for inexplicit than for explicit or embedded directives.

Insert Table 3 about here.

To summarize findings for Set 1 questions, children in Grades 1, 3, and 5 were able to identify and respond to the intent of directives nembedded within spoken discourse. First- and third-grade students were not, however, as adept as fifth-grade students in comprehending pragmatic information embedded within written narratives. One explanation for the observed developmental pattern of variation in interpretation according to presentation mode may be that information conveyed by spoken language structures is processed or interpreted with the aid of situational and prosodic meaning cues. In reading, the processing demands of decoding seem to inhibit young children's ability to comprehend written language using the strategy which has worked well in conversation. They discover that a spoken language comprehension strategy which relies on situational context may be ineffective in understanding pragmatic relations expressed in written language. What may be required, in its place, is an alternative processing approach.

Analysis 2

Set 2 questions were designed to study elementary school-age children's growing sensitivity to the range of language forms which can be used to convey directive intent. The school-age child's developing sensitivity to language structure and the relationship of structure to context has been characterized as a feature of communicative competence which constitutes a second spurt in language development (Loban, 1976).

The analysis of responses to Set 2 questions resulted in four findings. First, as Table 4 indicates, third- and fifth-grade students performed better than first-grade students on Set 2 questions across discourse modes. They were more sensitive to the variety of language forms which can be used to convey directive intent than were first-grade students and demonstrated this sensitivity by offering a wider range of directive paraphrases than did first-grade students. Given the picture book presentation, fifth-grade students (M = 22.9) scored significantly higher on Set 2 questions than first-grade students (M = 13.8), t_{Dunn} = 8.18, $p < .05$ as did third-grade students (M = 21), t_{Dunn} = 7.04, $p < .05$. Confidence intervals indicate that fifth-grade students were likely to score between 7 and 12 points higher on Set 2 questions than first-grade students while third-grade students were likely to score between 5 and 10 points higher on Set 2 questions than first-grade students.

This pattern was repeated following the written text presentation. Fifth-grade students (M = 21.9) scored significantly higher on Set 2 questions than first-grade students (M = 14.2), t_{Dunn} = 9.39, $p < .05$ as did third-grade students (M = 20.4), t_{Dunn} = 7.2, $p < .05$. Confidence intervals indicate that fifth-grade students were likely to score between 6 and 10 points higher on Set 2 questions than first-grade students while third-grade students were likely to score between 4 and 8 points higher.

Insert Table 4 about here.

Second, regardless of the stimulus narrative's presentation mode, the number and type of paraphrases offered remained consistent within grade. This finding suggests that children's developing knowledge of form, function, and context relations is unrelated to presentation mode. However, it may well be indicative of conversational knowledge which, once acquired, can be incorporated into the child's processing of directives embedded within spoken or written dialogue.

Third, no grade level differences were observed in production of explicit-harsh or embedded directives headed by _can, will_, etc. However, third- and fifth-grade students produced more _would, could_ embedded and inexplicit directives consistently than did first-grade students.

Despite these differences, an interesting pattern emerged across grade level. All grades maintained an identical pattern

in producing increasingly polite alternatives. What changed was the frequency with which alternatives were offered and the dramatic increase in inexplicit directive alternatives offered by the third- and fifth- grade students. First-grade students typically offered three alternatives in the following order: a) explicit-harsh; b) embedded directive headed by can,will, etc.; and c) explicit softened with please, a vocative, or an intonational shift. Third- and fifth- grade students offered consistently a fourth alternative, an embedded directive headed by would,could, etc.

The older children were often able to provide a fifth alternative, an inexplicit directive, following a probe. Even the fifth graders, however, rarely offered inexplicit directives spontaneously. When probed, however, third-grade students offered acceptable actions frequently which could serve as inexplicit directives in context while fifth-grade students provided verbally inexplicit directives.

The politeness dimension, thus, was seen to shift gradually from harshly spoken imperatives to embedded questions often softened by the addition of please, vocatives, or endearments. Inexplicit directives were generally not viewed as the most polite means to convey directive intent by first- or third- grade students. Fifth grade students, however, did indicate often that inexplicit paraphrases were the most polite and cited specifically the indirectness of these paraphrases as central to

politeness. For example, a fifth-grade student paraphrased "Mommy, Mommy, I need the hammer" indirectly as a non-explicit question: "Do you know where the hammer is?" when asked to explain why this was nicer than the previously offered, "Will you give me the hammer?", the child said, "You're not saying you want it... you're kind of hinting."

The fourth finding on Set 2 questions was that no particular directive type stood out as being a more difficult stimulus for appropriate paraphrasing of intent.

In sum, findings related to Set 2 questions indicate that third- and fifth-grade students were more sensitive than first-grade students to the alternative forms which can be used to convey directive intent. This greater sensitivity may arise from broadened social, cognitive, and language experience. Active participation in language events within their natural social contexts fosters the development of pragmatic competence for directive comprehension, regardless of presentation mode. In directive comprehension, the acquired background knowledge includes the range of language choices available to a speaker who is conveying directive intent in specified social circumstances.

Analysis 3

Set 3 questions examined language reasoning capacity by asking the children to reflect upon the relationship of language form and function to discourse context. The questions were

constructed as a continuation of Bates's (1976) study on the developing reasoning capabilities of young children. They asked subjects to discuss each story's directive form with respect to its function within a specified social situation. Four findings resulted from the analysis of responses to Set 3 questions.

First, Table 5 indicates that regardless of discourse mode, fifth-grade students were more adept at perceiving the relationship between form, function, and context than were first- or third-grade students. In turn, third-grade students were more sensitive to pragmatic relations than were first-grade students. To Set 3 questions posed following the picture book presentation, fifth-grade students (M = 14.7) scored significantly higher than did first-grade students (M = 5.6), t_{Dunn} = 9.15, $p < .05$ and third-grade students (M = 8.7), t_{Dunn} = 6.06, $p < .05$. In turn, third-grade students scored significantly higher than did first-grade students, t_{Dunn} = 3.18, $p < .05$. Confidence intervals indicate that fifth-grade students were likely to score between 7 and 12 points higher than first-grade students and 4 and 9 points higher than third-grade students on Set 3 questions posed after the picture book presentation. Third grade students were likely to score between 1 and 6 points higher than first-grade students on Set 3 questions.

Insert Table 5 about here.

This pattern was repeated for Set 3 questions posed after the written story presentation. Fifth-grade students (M = 14.4) scored significantly higher than first-grade students (M = 5.4),

t_{Dunn} = 10.59, $p < .05$ and third-grade students (M = 8.5), t_{Dunn} = 6.88, $p < .05$ while third-grade students scored significantly higher than first-grade students, t_{Dunn} = 3.71, $p < .05$. Confidence intervals indicate that fifth-grade students were likely to score betweeen 7 and 11 points higher on Set 3 questions than first-grade students and 4 and 8 points higher than third-grade students. Third-grade students were likely to score between 1 and 5 points higher than first-grade students.

Insert Table 5 About Here

Second, the capacity to construct accurately the pragmatic relations of form, function, and context appears to influence successful comprehension of directives embedded within conversational narratives and written dialogue. In the course of encounters with language in social settings, it appears that the children gradually acquired the conversational knowledge nunderlying the connection between language structure and communicative intention in a specified context. Once acquired this information was utilized in both listening and reading comprehension.

Third, first-grade students displayed little or no pragmatic sensitivity to the language and context relationship across discourse modes; 75% of first-grade responses were rated 0 or 1 on the Pragmatic Sensitivity Scale. For example, when asked why a mother might appropriately tell her children to stop making a mess by the explicit directive, "Children, stop making such a mess!", one first-grade students said, "It's wasting food; ice

cream melting on the floor; tries to scrub it, but she can't." The child does not demonstrate any pragmatic sensitivity to the form, function, context relationship. Rather, she reiterates the story line, embellishing it with an ethical judgment and a reference to the mother's likely physical response to try to clean it up.

Third-grade students displayed greater pragmatic sensitivity. Seventy-one percent of their responses were scored either 1, showing incipient sensitivity to the pragmatic element or 2, showing evidence of reasoning on form, function, and context relations although the reasoning was inaccurate or incomplete. For example, when asked why it was appropriate for Sue to convey directive intent to Miss Crane using the embedded request, "Miss Crane, would you please help us get the ball?", a third-grade student said, "She talked nicely so Miss Crane would do it." Here, the child perceives correctly the tone of the request, relating tone to directive function. She does not, however, also account for discourse context in her reasoning.

Only fifth-grade students demonstrated consistently the capacity to perceive accurately and completely the relationship between language form and function and discourse context. Seventy-eight percent of the fifth-grade responses were scored either 2 or 3. For example, when asked why it was appropriate for the mother to use an inexplicit question when she wanted her children to stop playing in the mud, a fifth-grade student said,

"Mom was upset but she doesn't want to be too mean. Kids hint to to each other. Mom knows that they would understand." Here, the child refers specifically to a situation in which it is appropriate to convey directive intent by means of a hint or non-explicit question.

As the children gain social, cognitive, and language experience, their reasoning capacity appears to broaden from responses lacking sensitivity to form, function, and context relations to those in which accurate perception is apparent. In addition, fifth-grade students often provided extended discussion on reasons underlying language choice in context while the younger children rarely did. Discussion, however, was always grounded in the story line example. None of the children offered responses which might be characterized as references to abstract principles of conversation.

The fourth finding with respect to Set 3 questions was that reasoning capacity was not influenced by the degree of explicitness inherent in the directives. Despite the superiority of the fifth-grade students in perceiving accurately the pragmatic characteristics of all directives, however, it was apparent from within-grade comparisons that first- and third-grade students found it somewhat easier to reason about the embedded directives than they did about the inexplicit directives.

In sum, findings related to Set 3 questions suggest that

proficiency in constructing the relationship between language form, function, and social context arises from experience in using language within social settings. The development of reasoning with respect to pragmatic relations does not appear to be affected by discourse mode. Once the conversational knowledge is acquired, it can be utilized in comprehension of directives embedded within spoken or written discourse.

Discussion

The three analyses of responses to questions posed in this study suggest the possibility of alternative processing strategies which can be utilized in comprehending narratives containing directives. Strategy 1, reciprocity, characterizes the means by which understanding was likely to occur for children whose comprehension of spoken language was superior to that of written language; whose facility with the range of language forms conveying directive intent was limited; and who demonstrated virtually no capacity to reason about the relationship of language form and function to discourse context.

Cook-Gumperz(1975) provides the theoretical basis for Strategy 1 in discussing a social and cognitive reciprocity principle at work during the preschool period of child development when children acquire their native language. Realization of this principle allows children to accept the fact that they are like others and to assume that others view the world as they do. Utilization of the principle is apparent, for

example, when preschoolers engage in social speech. Exclusive reliance on it, however, may obscure understanding that people do not always share the same perspective in terms of background knowledge, language sophistication or usage in social context. During the early period of language acquisition, thus, it is not uncommon to observe children engaging in both social speech and nonegocentric thought (Berko-Gleason, 1973; Maratsos, 1973; Menig-Peterson, 1975; Shatz & Gelman, 1973) and nonsocial speech and egocentric though (Asher, 1978; Cowan, 1978; Flavell, 1977; Krauss & Glucksberg, 1977; Piaget, 1959; Selman, 1971, 1974).

The reciprocity principle may also operate on the child's interpretation of messages. While adults tend to foreground culturally-variant language forms marking a speaker's intention, such as address terms or politeness features, and background associated prosodic and situational cues, young children seem to be more sensitive to these backgrounded cues rather than to the language forms. Because it may be more difficult to consider simultaneously all aspects of the message and mode, young children initially choose the more salient aspects for focus. As Shatz (1978) demonstrated in her studies of 2-year-olds, the salient aspects appear initially to be situational. The child processes the language choice within the more salient nonlinguistic context. Discourse processing in this manner often results in an accurate determination of speaker meanings, but sometimes it may not. As yet, discrepancies between choice of language form, function, and context may not be discriminated

consistently, but the child does not realize that the processing strategy is not always effective.

As a first processing strategy in comprehending directives embedded within conversational narratives, reciprocity involves the foregrounding of situational and prosodic cues as aids in determining the meaning of language choices within social context. The findings of this research suggest that by first grade, children construct the intended illocutionary effect of explicit, embedded, and inexplicit directives accurately so long as the speaker's choice of language form is recognized as a directive attempt within a larger spoken discourse context. In conversation, comprehension is then conveyed by a pragmatically appropriate compliant or noncompliant response. However, if the mapping of intent to structure is not simple, as in the case of inexplicit directives embedded within written dialogue, the child must rely on prior experience interpreting unconventional directives and contextual support to interpret meaning accurately. When prior experience and/or contextual support is inadequate, a mapping failure can result in either a pragmatically inappropriate response or no response.

Strategy 2, reflexivity, is proposed as the means used by children whose reading comprehension of directives embedded within written discourse approached but was not equivalent to their spoken discourse comprehension. These children have acquired background knowledge concerning the range of language

forms which can be used to convey directive intent, but are not able to reason accurately about the relationship of language form and function to discourse context.

Cook-Gumperz (1975) again provides the theoretical basis for this strategy when she discusses a cognitive and social reflexivity principle at work during the period in which children acquire the more complex aspects of language necessary for truthful representation of point of view. This principle captures the essence of cognitive decentration (Piaget & Inhelder, 1969), perspective-taking (Flavell et al., 1968; Krauss & Glucksberg, 1977), and self-reflection (Selman, 1974) within the broader perspective of social behavior and language. Realization of the principle occurs when a child begins to understand that participants may share conversational rules, and a system of nonlinguistic meaning cues, but maintain different points of view. Because participants often have different perspectives, they must rely on attention to language form choices when determining intent and social meaning. It is the choice of forms, rather than situational cues, which marks most clearly a speaker's meaning. Once children realize that it is attention to language form which is of utmost importance in comprehension, they can begin to foreground linguistic features and background the nonlinguistic ones. It is now that the second spurt in language development observed by Loban (1976) occurs as more sophisticated grammatical and lexical constructions are acquired for precise representation of point of view. Becoming

skilled in foregrounding the linguistic aspects of a message, thus, is evidence of the reflexivity principle at work.

The reflexivity processing strategy, thus, can be viewed as a substitute for the reciprocity strategy when the latter fails to yield adequate comprehension. Given improved role-taking ability, the child knows that one's perspective may differ from the speaker's. Therefore, primary attention to language form is necessary in linking intent,context,and text. If the mapping can occur on this basis, comprehension is indicated by a pragmatically appropriate compliant or noncompliant response. If not, an inappropriate response requires speaker rephrasing of the directive.

Third-grade students do show evidence of shifting from the reciprocity to the reflexivity strategy by their more accurate interpretation of directives embedded within written dialogue. However, exclusive use of the reciprocity and/or reflexivity strategies does not guarantee that comprehension of directive intent will be accurate consistently regardless of presentation mode. Even the third-grade students in this research failed to comprehend the directives embedded within written language as well as those embedded within spoken language.

Beyond recognition and production of the range of language forms which convey directive intent, there appears to be yet another processing strategy available to some elementary school-age children. The reflexivity strategy may foster

accurate comprehension when the reciprocity approach fails. It does not, however, always work.

To account for some students' consistently successful comprehension of directive intent regardless of presentation mode or directive type, a third alternative processing strategy is proposed. Strategy 3, reasoning, represents a third alternative processing approach, one by which foregrounded language choices can become the object of thought when the links between language structure and meaning are unclear. It can replace the reciprocity or reflexivity strategies in spoken language comprehension if all else fails. Perhaps more important, it may represent the processing approach used consistently in reading when the nonlinguistic cues associated with spoken language are unavailable as interpretation aids.

Reasoning capacity may well involve metalinguistic awareness, "the ability to make language forms opaque and attend to them in and of themselves" (Cazden, 1974) and the ability to infer perspective by mutual role-taking (Flavell, 1977; Selman, 1974). Many researchers have speculated that utilization of metacognitive and metalinguistic awareness as well as inference in perspective-taking can not be effective until children perceive accurately relationships of objects and events (Asher, 1978; Cook-Gumperz, 1975; Flavell, 1977), generally during the latter elementary school years.

The reasoning strategy, thus, can be substituted for the

less sophisticated reciprocity or reflexivity strategies when a careful analysis of pragmatic relations will result in more accurate comprehension of directive intent. In the current research, only fifth-grade students showed evidence of accurately reasoning the relationship between directive form, function, and context. In addition, only fifth-grade students comprehended the intent of even the inexplicit directives embedded within written texts as well as they they comprehended the intent of directives embedded within the spoken texts. One explanation for the fifth-grade students' improved comprehension of pragmatic relations expressed in written dialogue may be that these students have acquired alternative strategies which they can selectively call upon if needed. In the course of learning to use language in varied social circumstances, the children gradually developed a mental model of pragmatic language use. This model underlies the choice of a reasoning directive processing strategy, regardless of presentation mode, when less sophisticated strategies fail to yield adequate comprehension.

Conclusion

This research posed three questions. First, do alternative directive processing strategies evolve as children gain social, cognitive and language experience? Second, does comprehension of pragmatic relations expressed in conversation or written dialogue improve when these relations can be constructed accurately? Finally, what effect does the availability of nonlinguistic

meaning cues in support of linguistic structures have on directive comprehension and/or the processing strategy used?

The findings of the research indicate that understanding the relationship of text to context in discourse comprehension naturally develops as children learn language. Acquiring knowledge of pragmatic language use is as essential in becoming a fluent speaker and literate reader and writer as is learning the grammar of one's native language. During the elementary school years, children learn a great deal about pragmatic language use. The development of alternative directive processing strategies is one way children demonstrate flexibility in applying pragmatic language knowledge in varying communicative contexts. In this research, these strategies are referred to as reciprocity, reflexivity, and reasoning.

It was also found that children who could construct pragmatic relations were more likely to interpet directive intentions accurately, regardless of presentation mode. Having an established mental model of pragmatic relations became important especially when comprehending inexplicit directives embedded within written stories. This finding suggests the possibility of an inverse relationship between the extent of one's knowledge concerning pragmatic relations and the importance of situational cues in support of linguistic messages. That is, listeners and readers who bring detailed knowledge of form, function, and context relations to the comprehension task, may be less

dependent on situational cues to comprehend the meaning of even the most inexplicit of directives.

The degree to which prosodic or situational meaning cues support linguistic messages appears to have the most serious effect on the reading comprehension of first-grade students. These children seem to utilize a discourse processing strategy in reading comprehension which is identical to the process used in spoken language comprehension. The strategy, reciprocity, works well in conversation when language choices are interpreted within a larger situational context. Unfortunately, it is not useful in reading text without illustrations. This study contrasted reading of decontextualized stories with listening to spoken narratives accompanied by picture book context cues. The contrast demonstrated that young readers are at a disadvantage when asked to read texts without illustrations. This situation is best avoided when young children read.

As mental models of pragmatic relations evolve, children begin to sense when their directive processing strategy fails in comprehension. First-grade students may recognize that a text does not make sense, but when their reciprocity directive processing strategy fails, they have limited alternatives to which they can turn. Third-grade students, however, seem to have expanded their repertoire of processing strategies to include a broader understanding of the range of language forms which can be used to convey directive intent. This strategy, reflexivity, can

be substituted for the reciprocity approach when the latter fails to yield accurate comprehension. Utilization of this approach does not ensure, however, reading comprehension of directives embedded within narratives will be as accurate as that of listening comprehension.

Only fifth-grade students comprehended the pragmatic relations expressed in the written narratives as well as they comprehended those expressed in the spoken narratives accompanied by pictures. This finding led to the proposal of a third directive processing strategy, reasoning, which can be substituted for the less sophisticated approaches when necessary. The ability to use a reasoning strategy demonstrates that the earlier reliance on situational cues in directive comprehension has been replaced by a mental model of pragmatic relations. The use of this strategy appears to be important especially when reading inexplicit directives embedded within written discourse.

In all, these findings suggest that directive comprehension will not be accurate consistently, regardless of presentation mode, until children have had considerable exposure to and experience with language in varying social contexts. Through such encounters, children develop an understanding of the relation of text to context in everyday communicative situations. This understanding forms the basis of a mental model of pragmatic relations which eventually frees directive comprehension from reliance on situational cues in support of linguistic messages.

Future Research

Suggestions for future research include:

- Explore the strategies children use in directive comprehension in greater detail, trying to devise ways to ascertain the strategy a child is using and the knowledge underlying its use.
- Analyze existing texts for the presence of pragmatic features and select a sample of these texts for inclusion in a follow-up study.
- Add a comparison group which reads stories with accompanying illustrations.
- Add a contrast of everyday natural use of directives to comprehension of directives embedded within the spoken and written narratives.

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Appendix A

The Mud Puddle

Sarah and David, sister and brother, were all dressed to go to a birthday party. Seven-year-old Sarah was wearing a pretty red dress. Nine-year-old David was wearing a blue jacket and green pants. They looked terrific. Mom told them to stay neat and clean until she finished her kitchen chores. Then they would go to the party.

The children didn't know what to do while they were waiting for Mom. It was a beautiful day so they decided to go outside to play. Out the door they went and before long, they were playing in a mud puddle on the lawn. They made mud pies and got mud all over themselves and their party clothes.

Mom was ready to go to the party. She put on her coat and went to get the children. When she found them playing in the mud, she couldn't believe her eyes. She was so upset she didn't know what to say. Finally she looked at them and said, "Why are you playing in the mud?"

Appendix B

Question Sets 1,2 and 3

Set 1

1. Pretend you are listener in story. If you understand what speaker is saying and are willing to do what she/he wants, what do you say? What do you do? (appropriate compliance, intended illocutionary effect, intended perlocutionary effect)

2. Pretend you are listener. If you understand what speaker wants, but are unwilling to do it, what do you say? What do you do? (appropriate noncompliance, intended illocutionary effect)

3. Pretend you are listener. If you wanted to deliberately ignore speaker so that she/he wouldn't know if you understood and would have to think of another way to get you to do what she/he wants, what would you say? What would you do? (inappropriate response - child must give a context-sensitive although inappropriate response to receive credit)

4. Pretend you are speaker. What are you trying to tell listener when you say story directive?

Set 2

You know that people ask for things in many different ways depending on who they're talking to, what they're talking about, or where the conversation takes place. In the story, speaker said story directive to listener when she/he was trying to say directive intent. (This is stated correctly by the researcher even if the child stated it incorrectly on Set 1 questions). In the story, speaker thought it was best to say story directive in the way she/he said it. But in other situations, a person might say it differently. Now I want to see how many different ways you can think of to say what speaker said in the story.

Can you think of a very direct, mean, or rude way to say story directive? Can you think of a way that's a little nicer? Even nicer? Even nicer? Even nicer? (5 attempts in all)

(If an inexplicit directive does not result, ask the child to think of a way for speaker to say directive intent without actually saying what she/he wants.)

Set 3

You know that in different situations a person says what she/he wants to say in different ways. In the story, speaker said story directive to listener. I want you to think about everything that happened in the story - who was talking, who she/he was talking to, what they were talking about, and where the story took place. Why do you think that in situations like the one of this story, it is OK (or appropriate) to say story intent in the way that speaker said it to listener?

(Try to elicit as many contextual features, ideas about pragmatic relations, and conversational rules underlying usage as possible until you feel certain that the response is complete.)

Appendix C

Pragmatic Sensitivity Scale

0 No pragmatic sensitivity
No reasons offered or irrelevant rationale as evidenced by absolute or absolute linguistic judgments (i.e., "It sounded better.")

1 Incipient sensitivity to the pragmatic element
Repetition of the actual directive or identification of directive intent (i.e., "She wanted him to close the door.")

2 Faulty concrete reasoning
Offers a reason linking language to context which shows an attempt to reason falling short of accuracy; Identifies mood, but links mood to directive intent rather than to context characteristics; Identifies the pragmatic device and offers a reason for its use, but misses the main point in context (i.e., The child notes that a character was trying to "be polite" when the character was not trying to "be polite".)

4 Elaborate concrete reasoning
Offers more than one reason linking language to context, specifically citing characteristics of the story. Cites not only emotional state of speaker or degree of politeness, but also refers to more than one characteristic of the immediate situation.

5 Abstract reasoning
Goes beyond the qualities of the story to cite principles of language choice which apply generally in certain situations (i.e., A child might say that it is appropriate to be very explicit when you expect someone to do what you want without arguing about it.)

Table 1

Directives

Directive Categories	Examples	
	Set A	Set B
1. Explicit Directives		
a. Imperative	"Children stop making such a mess!"	"Please, stop crying!"
b. Need/Want Statement	"I want another piece of cake."	"Mommy, Mommy, I need the hammer."
2. Embedded Directives		
a. Permission Request	"Can I have this block?"	"Can I take the plane home overnight?"
b. Explicit Question	"Mark will you take Rascal out for a walk?"	"Miss Crane, would you help us get the ball?"
3. Inexplicit Directives		
a. Non-explicit Question	"Why are you playing in the mud?"	"Do you have to watch the rest of the News?"
b. Hint	"Hey Steve, the door's closed."	"Whose things are those?"

Table 2

Mean Scores on Set 1 Questions

		Set 1 Questions	
Grade	n	Listening	Reading
1	20	28.2	22.9
3	20	28.5	24.8
5	20	29	27.8

Note. The maximum score on Set 1 questions for the individual listening and reading comprehension tasks = 30.

Table 3

Mean Difference Scores on Set 1 Questions for Each Directive Category

		Set 1 Questions: Listening Minus Reading		
Grade	n	Explicit	Embedded	Inexplicit
1	20	.9	.9	3.5
3	20	1.1	1.2	2.7
5	20	.3	.2	.7

Note. Read the means reported above as in the following example: The mean difference in responses to Set 1 questions referring to explicit directives presented in listening and reading comprehension tasks was .

Table 4

Mean Scores on Set 2 Questions

		Set 2 Questions	
Grade	n	Listening	Reading
1	20	13.8	14.2
3	20	21	20.4
5	20	22.9	21.9

Note. The maximum score for Set 2 questions on the individual listening and reading comprehension tasks = 30.

Table 5

Mean Scores on Set 3 Questions

		Set 3 Questions	
Grade	n	Listening	Reading
1	20	5.6	5.4
3	20	8.7	8.5
5	20	14.7	14.4

Note. The maximum score on Set 3 Questions for the individual listening and reading comprehension tasks = 30.